

(U.S.)

Attorney Docket No.: UK02-009

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): Webb, et al
Serial No.:
Filed: Herewith
For: Optical Regenerator

COMBINED
CERTIFICATE UNDER
37 C.F.R. § 3.73(b)
and
POWER OF ATTORNEY

Commissioner for Patents
Alexandria, VA 22313

CERTIFICATE UNDER 37 C.F.R. § 3.73(b)

CORNING INCORPORATED, a New York corporation, certifies that it is the assignee of the entire right, title and interest in the patent application identified above by virtue of an assignment from the inventor(s) of the patent application identified above. A true copy of the unrecorded Assignment is attached hereto.

The undersigned has reviewed the above referenced assignment of the patent application identified above and, to the best of the undersigned's knowledge and belief, title is in the assignee identified above.

The undersigned is empowered to sign this certificate on behalf of the assignee.

I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and further, that these statements are made with the knowledge that willful false statements, and the like so made, are punishable by fine or imprisonment, or both, under Section 1001, Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

POWER OF ATTORNEY BY ASSIGNEE

CORNING INCORPORATED, the assignee of the full and exclusive right, title and interest in and to the accompanying application for United States Letters Patent entitled **Optical Regenerator** in the names of **Roderick Peter Webb, Alistair James Poustie, and Robert John Manning**, appoints the practitioners associated with the Customer Numbers provided below (i.e., the practitioners associated with the Intellectual Property Department, Corning Incorporated) to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith. Please direct all correspondence to Ronald J. Paglierani at the address associated with Customer Number 31362.

Customer Number: 31362 & 22928

Date: 6-17-03

CORNING INCORPORATED

By

Mark W. Lauroesch
Assistant Secretary

As a below named inventor, I declare that:

My residence, Post Office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

"Optical Regenerator"

The specification of which (check only one item below):

☒ is attached hereto

☐ was filed as United States Application Serial No. _____ on _____
and was amended on _____ (if applicable)

☐ was filed as PCT international application number _____, on _____, and was
amended under PCT Article 19 on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate or 365(a) of any PCT international application which designated at least one country other than the United States, listed below and have also identified below any foreign application for patent or inventor's certificate, on the same subject matter, having a filing date before that of the application on which priority is claimed:

☒ **Country:** Great Britain **Application No.:** 01 214 952.4 **Filing Date:** 28 June 2002

☐ **NONE**

I hereby claim the benefit under Title 35 United States Code § 119(e) and § 120 of any United States application(s) or 365(c) of any PCT international application designating the United States listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35 United States Code § 112, I acknowledge the duty to disclose

material information as defined in Title 37 Code of Federal Regulations, § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<input type="checkbox"/>	Provisional No.:	Filed:	Status:
<input type="checkbox"/>	Application No.:	Filed:	Status:
	PCT Application No:	Filed:	Status:

☐ NONE

I appoint the practitioners associated with the Customer Number provided below (i.e., the practitioners associated with the Intellectual Property Department, Corning Incorporated) to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith. Please direct all correspondence to **Ronald J. Paglierani, Reg. no. 29,201 at the Corning Incorporated, Patents Department, 11 Oak Park, Bedford, Massachusetts, 01730, U.S.A., Telephone (781) 280 9030, Facsimile No.: (781) 280 3301.**

Customer Number: 22928

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Inventor: Roderick Peter WEBB

Resident Address: 18 Daffodil Fields, Ballincollig, Co. Cork, Republic of Ireland
and 72 Easton Road, Hacheston, Woodbridge, Suffolk, IP13
0DX, Great Britain

Post Office Address: same

Citizenship: British

June 12, 2003

Roderick Peter Webb

Roderick Peter WEBB

Full Name of Inventor:

Alistair POUSTIE

Resident Address:

60 Lattice Avenue, Ipswich, Suffolk, IP4 5LL, Great Britain

Post Office Address:

same

Citizenship:

British

June, 2003

Alistair POUSTIE

Full Name of Inventor:

Robert John MANNING

Resident Address:

14 Green Lodge, Maryborough Woods, Douglas, Co.
Cork, Republic of Ireland (formerly of 17 Palmcroft
Close, Ipswich, Suffolk, IP1 6RB, Great Britain)

Post Office Address:

same

Citizenship:

British

June, 2003

Robert John MANNING

As a below named inventor, I declare that:

My residence, Post Office address and citizenship are as stated below next to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

"Optical Regenerator"

The specification of which (check only one item below):

☒ is attached hereto

☐ was filed as United States Application Serial No. _____ on _____
and was amended on _____ (if applicable)

☐ was filed as PCT international application number _____, on _____, and was
amended under PCT Article 19 on _____ (if applicable).

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, § 1.56.

I hereby claim foreign priority benefits under Title 35, United States Code, § 119(a)-(d) or 365(b) of any foreign application(s) for patent or inventor's certificate or 365(a) of any PCT international application which designated at least one country other than the United States, listed below and have also identified below any foreign application for patent or inventor's certificate, on the same subject matter, having a filing date before that of the application on which priority is claimed:

☒ **Country:** Great Britain **Application No.:** 01 214 952.4 **Filing Date:** 28 June 2002

☐ **NONE**

I hereby claim the benefit under Title 35 United States Code § 119(e) and § 120 of any United States application(s) or 365(c) of any PCT international application designating the United States listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in the prior United States application in the manner provided by the first paragraph of Title 35 United States Code § 112, I acknowledge the duty to disclose

material information as defined in Title 37 Code of Federal Regulations, § 1.56 which occurred between the filing date of the prior application and the national or PCT international filing date of this application:

<input type="checkbox"/>	Provisional No.:	Filed:	Status:
<input type="checkbox"/>	Application No.:	Filed:	Status:
	PCT Application No:	Filed:	Status:

☐ **NONE**

I appoint the practitioners associated with the Customer Number provided below (i.e., the practitioners associated with the Intellectual Property Department, Corning Incorporated) to prosecute this application and to transact all business in the U.S. Patent and Trademark Office connected therewith. Please direct all correspondence to **Ronald J. Paglierani, Reg. no. 29,201 at the Corning Incorporated, Patents Department, 11 Oak Park, Bedford, Massachusetts, 01730, U.S.A., Telephone (781) 280 9030, Facsimile No.: (781) 280 3301.**

Customer Number: 22928

I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that wilful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such wilful false statements may jeopardize the validity of the application or any patent issued thereon.

Full Name of Inventor: **Roderick Peter WEBB**

Resident Address: 18 Daffodil Fields, Ballincollig, Co. Cork, Republic of Ireland
and 72 Easton Road, Hacheston, Woodbridge, Suffolk, IP13
0DX, Great Britain

Post Office Address: same

Citizenship: British

June, 2003

Roderick Peter WEBB

Full Name of Inventor:

Alistair POUSTIE

Resident Address:

60 Lattice Avenue, Ipswich, Suffolk, IP4 5LL, Great Britain

Post Office Address:

same

Citizenship:

British

June 12, 2003

Alistair POUSTIE

Full Name of Inventor:

Robert John MANNING

Resident Address:

14 Green Lodge, Maryborough Woods, Douglas, Co.
Cork, Republic of Ireland (formerly of 17 Palmcroft
Close, Ipswich, Suffolk, IP1 6RB, Great Britain)

Post Office Address:

same

Citizenship:

British

June 12, 2003

Robert John Manning
Robert John MANNING

For use when there is at least one inventor employed by a European subsidiary. Attorney Docket UK02-009 that has agreed with Corning Incorporated that the inventions of its employees shall be owned by Corning Incorporated.

ACKNOWLEDGEMENT, ASSIGNMENT and UNDERTAKING

PART 1

I, Roderick Peter Webb of 72 Easton Road, Hacheston, Woodbridge, Suffolk, IP13 0DX, England, do hereby assert and acknowledge to Corning Incorporated, a corporation organized and existing under the laws of the State of New York, having its principal place of business at Corning, New York, and formerly called Corning Glass Works, (hereinafter CORNING):

1 That I made as joint inventor with Alistair Poustie of 60 Lattis Avenue, Ipswich, Suffolk, IP4 5LL England and Robert John Manning of 17 Palmcroft Close, Ipswich, Suffolk, IP1 6RB, England an invention or a series of related inventions (hereinafter "said invention") relating to Optical Regenerator which is the subject of a patent application made to the British Patent Office on 28 June 2002 and having the application number 0214952.4 (hereinafter "said patent application").

2. That I am [or was at the time said invention was made] employed by Corning Limited, a British Company having its registered office at Wear Glass Works, Sunderland, SR4 6EJ, England ("my country") a wholly-owned subsidiary of CORNING (hereinafter "CL"), and that I work [or was working] in the group known as "Corning Research Centre" at CL's facility at Martlesham Heath, Ipswich, Suffolk, and that said invention was made either

(a) in the course of my normal duties in circumstances such that an invention might reasonably be expected to result from carrying out of those duties;

or

(b) in the course of duties falling outside my normal duties but specifically assigned to me in circumstances such that an invention might reasonably be expected to result from the carrying out of those duties.

or

(c) in the course of my duties and because of the nature of those duties and the particular responsibilities arising from them I had a special obligation to further the commercial interests of my employer's undertaking.

3. That I have been informed of an Agreement dated the 14th day of February 2000 between CORNING and CL which provides, *inter alia*, that all patents, applications for patents, and inventions which are conceived and/or reduced to practice in a Development Program under that Agreement by CL and /or its employees, either individually, or jointly with CORNING and/or its employees shall belong to CORNING, and am informed and believe that my invention was made in the course of such a Development Program.

4 That said invention and said patent application accordingly belong according to the law of my country to CORNING

5 FOR VALUE RECEIVED, I hereby sell, assign and transfer unto CORNING, as assignee, and unto its successors, assigns and legal representatives, any and all right, title and interest that I may still have in said invention, for the United States of America and all other countries, and all Letters Patents or other rights of like nature that may be granted therefor;

and I request that any and all patents and other rights for said invention be issued to CORNING, its successors, assigns and legal representatives, or to such nominees as CORNING may designate.

6 I UNDERTAKE that, when requested, I will, without charge to CORNING and at CORNING's expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing and maintaining patents or other rights of like nature for said invention in any and all countries and for vesting title thereto in CORNING, its successors, assigns and legal representatives or nominees, for obtaining in respect of said invention any rights arising under the International Convention for the Protection of Industrial Property, the Patent Co-operation Treaty or any other International Agreement or Treaty whatsoever, and generally for giving effect to this Acknowledgement, Assignment and Undertaking.

7 I hereby CONSENT that a copy of this document shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of CORNING, or its successors, assigns and legal representatives or nominees to the benefit of said invention and of this Acknowledgement, Assignment and Undertaking.

8 I COVENANT with CORNING, its successors, assigns and legal representatives or nominees, that the rights and property herein conveyed are free and clear of any encumbrance, and that I have full right to convey the same as herein expressed.

9 I AGREE that this Acknowledgement, Assignment and Undertaking shall be construed according to the laws of the State of New York, United States of America, and that the Courts of that State and United States Federal Courts shall have exclusive jurisdiction over it.

Signed at Martlesham Heath, England this

16th day of January 2003

IMPORTANT: both the inventor and each witness MUST sign at least his/her first name, middle initial (if any) and surname; if in any doubt sign your whole name in full.

in the presence of

Full name of first witness:

Witness' address:

and of

Full name of witness:

Witness' address:

Roderick P. Webb

Roderick Peter Webb

[signature of first witness]

GABRIELE BONFRATE
25 BLACKDOWN AVENUE
RUSHMORE ST ANDREW
IPSWICH
SUFFOLK, IP5 1AY

JANUARY 16th 2003

[signature of second witness]

ROBERT C. MCDOUGALL
FLAT 2, 27 TODDENHAM ROAD
IPSWICH
SUFFOLK
IP4 2SN

JANUARY 16th 2003

PART 2

We, Corning Limited, Wear Glass Works, Sunderland, SR4 6EJ, England hereby acknowledge that this invention is of the class to which the Agreement identified in clause 3 of PART 1 above applies and in accordance with the terms of that Agreement we hereby sell, assign and transfer unto CORNING, as assignee, and unto its successors, assigns and legal representatives, any and all right, title and interest that we may have in said invention, for the United States of America and all other countries, and all Letters Patents or other rights of like nature that may be granted therefor; and we request that any and all patents and other rights for said invention be issued to CORNING, its successors, assigns and legal representatives, or to such nominees as CORNING may designate.

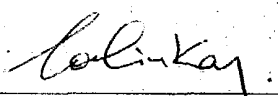
Corning Limited by:

Arthur Edward Neeves


Director

IMPORTANT: both the signatory and each witness MUST sign at least his/her first name, middle initial (if any) and surname; if in any doubt sign your whole name in full.

in the presence of


[signature of first witness]

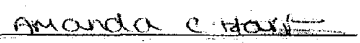
Full name of first witness:

COLIN KAY

Witness' address:

5 VILLAGE CT.
CONSETT, CO. DURHAM

and of


[signature of second witness]

Full name of witness: AMANDA CAROLINE HARRIS

Witness' address: 40 FOREST LANE, MARTLESHAM HEATH, IPSWICH,
SUFFOLK, IPS 3ST

note: the witnesses do not need special qualifications, but should NOT be members of the inventor's family, senior Corning employees or the Inventor's supervisor or manager, nor other inventors of the invention. Witnesses who are not Corning employees are preferred.

For use when there is at least one inventor employed by a European subsidiary Attorney Docket UK02-009
that has agreed with Corning Incorporated that the inventions of its employees
shall be owned by Corning Incorporated.

ACKNOWLEDGEMENT, ASSIGNMENT and UNDERTAKING

PART 1

I, Alistair James Poustie of 60 Lattice Avenue, Ipswich, Suffolk, IP4 5LL, England, do hereby assert and acknowledge to Corning Incorporated, a corporation organized and existing under the laws of the State of New York, having its principal place of business at Corning, New York, and formerly called Corning Glass Works, (hereinafter CORNING):

1 That I made as joint inventor with Robert John Manning of 17 Palmcroft Close, Ipswich, Suffolk, IP1 6RB, England and Roderick Peter Webb of 72 Easton Road, Hacheston, Woodbridge, Suffolk, IP13 0DX, England an invention or a series of related inventions (hereinafter "said invention") relating to Optical Regenerator which is the subject of a patent application made to the British Patent Office on 28 June 2002 and having the application number 0214952.4 (hereinafter "said patent application").

2 That I am [or was at the time said invention was made] employed by Corning Limited, a British Company having its registered office at Wear Glass Works, Sunderland, SR4 6EJ, England ("my country") a wholly-owned subsidiary of CORNING (hereinafter "CL"), and that I work [or was working] in the group known as "Corning Research Centre" at CL's facility at Martlesham Heath, Ipswich, Suffolk, and that said invention was made either

(a) in the course of my normal duties in circumstances such that an invention might reasonably be expected to result from carrying out of those duties;

or

(b) in the course of duties falling outside my normal duties but specifically assigned to me in circumstances such that an invention might reasonably be expected to result from the carrying out of those duties.

or

(c) in the course of my duties and because of the nature of those duties and the particular responsibilities arising from them I had a special obligation to further the commercial interests of my employer's undertaking.

3 That I have been informed of an Agreement dated the 14th day of February 2000 between CORNING and CL which provides, *inter alia*, that all patents, applications for patents, and inventions which are conceived and/or reduced to practice in a Development Program under that Agreement by CL and /or its employees, either individually, or jointly with CORNING and/or its employees shall belong to CORNING, and am informed and believe that my invention was made in the course of such a Development Program.

4 That said invention and said patent application accordingly belong according to the law of my country to CORNING

5 FOR VALUE RECEIVED, I hereby sell, assign and transfer unto CORNING, as assignee, and unto its successors, assigns and legal representatives, any and all right, title and interest that I may still have in said invention, for the United States of America and all other countries, and all Letters Patents or other rights of like nature that may be granted therefor;

and I request that any and all patents and other rights for said invention be issued to CORNING, its successors, assigns and legal representatives, or to such nominees as CORNING may designate.

6 I UNDERTAKE that, when requested, I will, without charge to CORNING and at CORNING's expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing and maintaining patents or other rights of like nature for said invention in any and all countries and for vesting title thereto in CORNING, its successors, assigns and legal representatives or nominees, for obtaining in respect of said invention any rights arising under the International Convention for the Protection of Industrial Property, the Patent Co-operation Treaty or any other International Agreement or Treaty whatsoever, and generally for giving effect to this Acknowledgement, Assignment and Undertaking.

7 I hereby CONSENT that a copy of this document shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of CORNING, or its successors, assigns and legal representatives or nominees to the benefit of said invention and of this Acknowledgement, Assignment and Undertaking.

8 I COVENANT with CORNING, its successors, assigns and legal representatives or nominees, that the rights and property herein conveyed are free and clear of any encumbrance, and that I have full right to convey the same as herein expressed.

9 I AGREE that this Acknowledgement, Assignment and Undertaking shall be construed according to the laws of the State of New York, United States of America, and that the Courts of that State and United States Federal Courts shall have exclusive jurisdiction over it.

Signed at Martlesham Heath, England this 17th day of January 2003

IMPORTANT: both the inventor and each witness MUST sign at least his/her first name, middle initial (if any) and surname; if any doubt sign your whole name in full.

in the presence of

Full name of first witness:

Witness' address:

and of

Full name of witness:

Witness' address:

Alistair J. Poustie

Alistair Poustie

[signature of first witness]

GABRIELE BONFRATE
25 BLACKDOWN AVENUE
RUSHMERE ST ANDREW
IPSWICH
SUFFOLK, IP13 1AY

JANUARY 17th, 2003

[signature of second witness]

Paul David Townsend

PAUL DAVID TOWNSEND

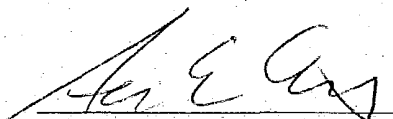
2 THOMAS WALLS CLOSE
GRUNDISBURGH
WOODBRIDGE
SUFFOLK IP13 6XB

PART 2

We, Corning Limited, Wear Glass Works, Sunderland, SR4 6EJ, England hereby acknowledge that this invention is of the class to which the Agreement identified in clause 3 of PART 1 above applies and in accordance with the terms of that Agreement we hereby sell, assign and transfer unto CORNING, as assignee, and unto its successors, assigns and legal representatives, any and all right, title and interest that we may have in said invention, for the United States of America and all other countries, and all Letters Patents or other rights of like nature that may be granted therefor; and we request that any and all patents and other rights for said invention be issued to CORNING, its successors, assigns and legal representatives, or to such nominees as CORNING may designate.

Corning Limited by:

Arthur Edward Neeves


Director

IMPORTANT: both the signatory and each witness MUST sign at least his/her first name, middle initial (if any) and surname; if in any doubt sign your whole name in full.

in the presence of

AMANDA C. HARRIS
[signature of first witness]

Full name of first witness: AMANDA CAROLINE HARRIS

Witness' address: 40 FOREST LANE, MARTLESHAM HEATH,
IPSWICH, SUFFOLK, IP5 3ST, U.K.

and of

ELIZABETH J. DREW
[signature of second witness]

Full name of witness: ELIZABETH JANE DREW

Witness' address: 100 TANGHAM COTTAGES TANGHAM
WOODBRIDGE SUFFOLK IP12 3NF

note: the witnesses do not need special qualifications, but should NOT be members of the inventor's family, senior Corning employees or the Inventor's supervisor or manager, nor other inventors of the invention. Witnesses who are not Corning employees are preferred.

For use when there is at least one inventor employed by a European subsidiary Attorney Docket UK02-009 that has agreed with Corning Incorporated that the inventions of its employees shall be owned by Corning Incorporated.

ACKNOWLEDGEMENT, ASSIGNMENT and UNDERTAKING

PART 1

I, Robert John Manning of 17 Palmcroft Close, Ipswich, Suffolk, IP1 6RB, England, do hereby assert and acknowledge to Corning Incorporated, a corporation organized and existing under the laws of the State of New York, having its principal place of business at Corning, New York, and formerly called Corning Glass Works, (hereinafter CORNING):

1 That I made as joint inventor with Alistair Poustie of 60 Lattis Avenue, Ipswich, Suffolk, IP4 5LL England and Roderick Peter Webb of 72 Easton Road, Hacheston, Woodbridge, Suffolk, IP13 0DX, England an invention or a series of related inventions (hereinafter "said invention") relating to Optical Regenerator which is the subject of a patent application made to the British Patent Office on 28 June 2002 and having the application number 0214952.4 (hereinafter "said patent application").

2. That I am [or was at the time said invention was made] employed by Corning Limited, a British Company having its registered office at Wear Glass Works, Sunderland, SR4 6EJ, England ("my country") a wholly-owned subsidiary of CORNING (hereinafter "CL"), and that I work [or was working] in the group known as "Corning Research Centre" at CL's facility at Martlesham Heath, Ipswich, Suffolk, and that said invention was made either

(a) in the course of my normal duties in circumstances such that an invention might reasonably be expected to result from carrying out of those duties;

or

(b) in the course of duties falling outside my normal duties but specifically assigned to me in circumstances such that an invention might reasonably be expected to result from the carrying out of those duties.

or

(c) in the course of my duties and because of the nature of those duties and the particular responsibilities arising from them I had a special obligation to further the commercial interests of my employer's undertaking.

3. That I have been informed of an Agreement dated the 14th day of February 2000 between CORNING and CL which provides, *inter alia*, that all patents, applications for patents, and inventions which are conceived and/or reduced to practice in a Development Program under that Agreement by CL and /or its employees, either individually, or jointly with CORNING and/or its employees shall belong to CORNING, and am informed and believe that my invention was made in the course of such a Development Program.

4 That said invention and said patent application accordingly belong according to the law of my country to CORNING

5 FOR VALUE RECEIVED, I hereby sell, assign and transfer unto CORNING, as assignee, and unto its successors, assigns and legal representatives, any and all right, title and interest that I may still have in said invention, for the United States of America and all other countries, and all Letters Patents or other rights of like nature that may be granted therefor;

and I request that any and all patents and other rights for said invention be issued to CORNING, its successors, assigns and legal representatives, or to such nominees as CORNING may designate.

6 I UNDERTAKE that, when requested, I will, without charge to CORNING and at CORNING's expense, sign all papers, take all rightful oaths, and do all acts which may be necessary, desirable or convenient for securing and maintaining patents or other rights of like nature for said invention in any and all countries and for vesting title thereto in CORNING, its successors, assigns and legal representatives or nominees, for obtaining in respect of said invention any rights arising under the International Convention for the Protection of Industrial Property, the Patent Co-operation Treaty or any other International Agreement or Treaty whatsoever, and generally for giving effect to this Acknowledgement, Assignment and Undertaking.

7 I hereby CONSENT that a copy of this document shall be deemed a full legal and formal equivalent of any assignment, consent to file or like document which may be required in any country for any purpose and more particularly in proof of the right of CORNING, or its successors, assigns and legal representatives or nominees to the benefit of said invention and of this Acknowledgement, Assignment and Undertaking.

8 I COVENANT with CORNING, its successors, assigns and legal representatives or nominees, that the rights and property herein conveyed are free and clear of any encumbrance, and that I have full right to convey the same as herein expressed.

9 I AGREE that this Acknowledgement, Assignment and Undertaking shall be construed according to the laws of the State of New York, United States of America, and that the Courts of that State and United States Federal Courts shall have exclusive jurisdiction over it.

Signed at Martlesham Heath, England this 16th day of JANUARY 2003

IMPORTANT: both the inventor and each witness MUST sign at least his/her first name, middle initial (if any) and surname; if in any doubt sign your whole name in full.

Robert John Manning
Robert John Manning

in the presence of

Peter Healey
[signature of first witness]

JANUARY 16th 2003

Full name of first witness:

PETER HEALEY

Witness' address:

31 NARBURY ROAD, IPSWICH, UK

and of

Gabriele Bonfrate
[signature of second witness]

Full name of witness:

GABRIELE BONFRATE

JANUARY 16th 2003

Witness' address:

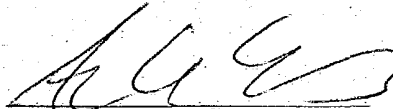
25 BLACKDOWN AVENUE
RUSHMERE ST ANDREW
IPSWICH
SUFFOLK
IP5 1AY

PART 2

We, Corning Limited, Wear Glass Works, Sunderland, SR4 6EJ, England hereby acknowledge that this invention is of the class to which the Agreement identified in clause 3 of PART 1 above applies and in accordance with the terms of that Agreement we hereby sell, assign and transfer unto CORNING, as assignee, and unto its successors, assigns and legal representatives, any and all right, title and interest that we may have in said invention, for the United States of America and all other countries, and all Letters Patents or other rights of like nature that may be granted therefor; and we request that any and all patents and other rights for said invention be issued to CORNING, its successors, assigns and legal representatives, or to such nominees as CORNING may designate.

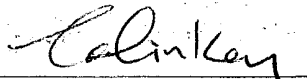
Corning Limited by:

Arthur Edward Neeves


Director

IMPORTANT: both the signatory and each witness MUST sign at least his/her first name, middle initial (if any) and surname; if in any doubt sign your whole name in full.

in the presence of


[signature of first witness]

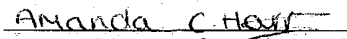
Full name of first witness:

COLIN KAY

Witness' address:

5 VILLA REAL COURT, CONSETT,
CO. DURHAM

and of


[signature of second witness]

Full name of witness: ~~Amanda C Harris~~ AMANDA CAROLINE HARRIS

Witness' address: 40 FOREST LANE, MARTLESHAM HEATH, IPSWICH, SUFFOLK
IP5 3ST

note: the witnesses do not need special qualifications, but should NOT be members of the inventor's family, senior Corning employees or the Inventor's supervisor or manager, nor other inventors of the invention. Witnesses who are not Corning employees are preferred.